ABSTRACT OF THE DISCLOSURE

A hybrid polypeptide composed of an identification peptide and a desired functional protein are produced by recombinant DNA techniques. A DNA expression vector is constructed that includes segments of DNA coding for the identification peptide and the desired functional protein. The identification peptide consists of a specific sequence of amino acids that has the desired affinity for a non-antibody capture protein. This peptide maybe linked to either the amino or carboxyl terminal of the functional protein. The identification peptide may or may not contain a sequence of amino acids that can be fragmented by sequence specific proteases or chemical agents to yield the native protein. The hybrid polypeptide produced by either cell or cell-free based expression systems is now suitable for further processing. This fusion protein can be purified by affinity chromatographic techniques using an immobilized non-antibody capture protein that has the desired affinity for the identification peptide. Alternately the capture protein may contain a label that will allow for the tracking of the functional protein in the system being studied.